REMARKS

Claims 1-14, 17-18, 21, and 22 are pending and stand rejected. Claims 15, 16, 19 and 20 have been cancelled. Claims 1, 5, 6, 10, 11, 17, and 22 have been amended. For at least the reasons explained below, the Applicants respectfully request the Examiner to withdraw the rejections and pass the application on to issuance.

CLAIM REJECTIONS – 35 USC § 102: The Examiner rejected Claims 1-14, 17-19, and 21 as being anticipated by US Pub. 2003/0090559 to Okano.

Okano is describes a printer cartridge (100) that includes a memory (13). That memory (13) is used to store "amount information" corresponding to a running count of sheets printed or toner consumed. The memory (13) is also used to store "process characteristic information." This "process characteristic information" is labeled SD and VL and while discussed is never defined in a coherent manner.

Okano, Fig. 3 illustrates memory (13) as containing a "correction value table" and "number of image formation." The number of image information is the running count. The correction value table is the process characteristic information. Okano provides no definition of the correction value table except that it is read and stored in a printer's main body apart from the printer cartridge (100). *See* Okano, paragraph [0086].

Claim 1 is directed to a computer readable medium integrated into a removable cartridge for an image forming device. The medium is programmed with a plurality of image enhancement data sets and data set selection criteria for selecting from among the image enhancement data sets. Claim 1 further recites that at least one image enhancement data set includes one or more of (1) data identifying two or more image enhancement techniques; (2) one or more parameters for implementing the two or more image enhancement techniques,

and (3) selection criteria for selecting from among the two or more image enhancement techniques.

The Examiner asserts that Okano's correction value table is equivalent with the plurality of image enhancement data sets recited in Claim 1. Okano provides little if any discussion as to correction value table and simply does not teach or suggest that its correction value table includes a plurality of image enhancement data sets where at least one of those data sets includes data identifying two or more image enhancement techniques, one or more parameters for implementing the two or more image enhancement techniques, and/or selection criteria for selecting from among the two or more image enhancement techniques.

For at least these reasons, Claim 1 is clearly patentable over Okano as are Claims 2-4 which depend from Claim 1.

Claim 5 is directed to a computer readable medium integrated into a removable cartridge that includes a printing component for an image forming device. The medium is formatted to store a state variable reflecting a state of the printing component and programmed with a plurality of image enhancement data sets and data set selection criteria that can be processed with the state variable to select from among the image enhancement data sets. Claim 5 further recites that at least one image enhancement data set includes one or more of (1) data identifying two or more image enhancement techniques; (2) one or more parameters for implementing the two or more image enhancement techniques, and (3) selection criteria for selecting from among the two or more image enhancement techniques.

As made clear with respect to Claim 1, Okano simply does not teach or suggest that its correction value table includes a plurality of image enhancement data sets where at least one of those data sets includes data identifying two or more image enhancement techniques, one or more parameters for implementing

the two or more image enhancement techniques, and/or selection criteria for selecting from among the two or more image enhancement techniques.

Claim 5 also requires that the cartridge integrated medium be programmed with data set selection criteria that can be processed with the state variable to select from among the image enhancement data sets. The Examiner asserts this is taught by Okano, paragraphs [0093] and [0094]. Those paragraphs are reproduced as follows:

> [0093] First of all, when the cartridge is attached, a read means reads out process characteristic information (VL, SD, and the like) and cartridge using amount information (the number of sheets or toner using amount information) from the NVRAM of the cartridge. In addition, the density correction data in the main body is renewed from the image density adjusting value information.
>
> [0094] To determine a density data correction value on the basis of the process information of the cartridge, using amount information, and image density adjusting value information, an appropriate value is determined by adding or integrating the density values of the respective tables.

Nothing in either paragraph teaches or suggests data set selection criteria that can be processed with a state variable to select from among image enhancement data sets.

For at least these reasons Claim 5 is patentable over Okano.

Claim 6 is directed to a removable cartridge for an image forming device. The cartridge includes:

- a printing component that can be utilized by the image forming device to assist in producing a printed image; and

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- a memory programmed with a plurality of image enhancement data sets and data set selection criteria for selecting from among the image enhancement data sets.

At least one image enhancement data set includes one or more of the following: (1) data identifying two or more image enhancement techniques, (2) one or more parameters for implementing the two or more image enhancement techniques, and (3) selection criteria for selecting from among the two or more image enhancement techniques.

As made clear with respect to Claim 1, Okano simply does not teach or suggest that its correction value table includes a plurality of image enhancement data sets where at least one of those data sets includes data identifying two or more image enhancement techniques, one or more parameters for implementing the two or more image enhancement techniques, and/or selection criteria for selecting from among the two or more image enhancement techniques.

For at least this reason Claim 6 is patentable over Okano as are Claims 7-9 due at least in part to their dependence form Claim 6.

Claim 10 is directed to a removable cartridge for an image forming device. The cartridge includes:
- a printing component that can be utilized by the image forming device to assist in producing a printed image; and
- a memory formatted to store a state variable reflecting a state of the printing component and programmed with a plurality of image enhancement data sets and data set selection criteria that can be processed with the state variable to select from among the image enhancement data sets.

At least one image enhancement data set includes one or more of the following: (1) data identifying two or more image enhancement techniques, (2) one or more parameters for implementing the two or more image enhancement techniques, and (3) selection criteria for selecting from among the two or more image enhancement techniques.

As made clear with respect to Claim 1, Okano simply does not teach or suggest that its correction value table includes a plurality of image enhancement data sets where at least one of those data sets includes data identifying two or more image enhancement techniques, one or more parameters for implementing the two or more image enhancement techniques, and/or selection criteria for selecting from among the two or more image enhancement techniques.

For at least this reason Claim 10 is patentable over Okano.

Claim 11 is directed to an image enhancement method and recites the following steps:

* obtaining data set selection criteria from a memory integrated into a removable cartridge for an image forming device;
* processing the data set selection criteria to select an image enhancement data set from a plurality of image enhancement data sets contained in the memory integrated into the removable cartridge; and
* implementing an image enhancement technique according to the selected image enhancement data set.

At least one image enhancement data set includes one or more of the following: (1) data identifying two or more image enhancement techniques, (2) one or more parameters for implementing the two or more image enhancement techniques, and (3) selection criteria for selecting from among the two or more image enhancement techniques.

As made clear with respect to Claim 1, Okano simply does not teach or suggest that its correction value table includes a plurality of image enhancement

data sets where at least one of those data sets includes data identifying two or more image enhancement techniques, one or more parameters for implementing the two or more image enhancement techniques, and/or selection criteria for selecting from among the two or more image enhancement techniques.

For at least these reasons Claim 11, is clearly patentable over Okano as are claims 12-14 which depend from Claim 11

Claim 17 is directed to a computer readable medium having instructions for implementing the method of Claim 11. For the same reason Claim 11 is patentable over Okano, so too are Claims 17 and Claims 18 and 21 which depend from Claim 17.

Claim 19 has been cancelled.

CLAIM REJECTIONS – 35 USC § 102: The Examiner rejected Claim 22 under §102 as being anticipated by USPN 6,158,837 issued to Hilton. Hilton is directed to an ink printer that can determine if an installed cartridge contains qualified ink and gives a user the option of printing with non-qualified ink. *See, e.g.,* Hilton, Abstract.

Claim 22 is directed to an image enhancement system for an image forming device and recites the following elements:

- a device memory storing default image enhancement data, and

- execution logic configured to determine if cartridge image enhancement data is present and to implement the cartridge image enhancement data, and if the cartridge image enhancement data is not present, the execution logic is configured to implement the default image enhancement data, the cartridge enhancement data, if present, being programmed on a computer

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readable medium integrated into a removable cartridge for the image forming device.

Rejecting Claim 22, the Examiner asserts that the first element above is taught by Hilton, col. 9, lines 61-67. That passage, and more, is reproduced as follows:

> FIGS. 6-9 are flow charts showing the operation of a control system for a printer having a normal printing mode and a non-normal printing mode. The non-normal printing mode enables a customer to have the option of using a cartridge with non-qualified ink and, though such printing is conducted in an out-of-warranty operation, it minimizes, if not eliminating, the potential detrimental effects thereof on the printer. Whenever the printer 10 is powered up by step 70, an initialization routine is entered in which the controller checks to see if all cartridges have been installed at step 72. If not, the missing cartridges are installed by the customer at step 73. If all cartridges are installed, the identification number of each cartridge is read at step 74 and checked for authorization at step 76 by comparing the numbers with the numbers stored in the printer controller memory for matches. If there are no identification numbers on the cartridges or there are no matches, the printer display panel 35 or personal computer monitor 37 displays "Wrong Cartridge" at step 77. If a competitor supplied cartridge is installed without an authorized identification number or a refilled cartridge with revised identification number is installed by the customer, then such cartridge is determined to contain non-qualified ink and may still be used but only in a non-normal printing mode as described before. To use a cartridge with non-qualified ink, the print start button 33 is pushed at step 78. The printer controller automatically changes the printing mode from the normal printing mode to the non-normal printing mode at step 79 and, at step 80, the printer display panel or personal computer monitor displays "Out-of-Warranty Printing" which remains displayed while printing in the non-normal printing mode. Next, at step 82, the printer controller cycles up the printer for non-normal printing, which includes ejecting a number of ink droplets at the maintenance station, usually twice the number for the normal printing mode, cleans the printhead nozzle face at least twice the number for normal printing, reduces the frequency of the droplet ejection (firing rate), and slows down the printing speed to provide more drying time for the printed sheets.

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Hilton, col. 9, line 39 through col. 10, line 10. Nothing in this passage teaches or even suggests a device memory storing default image enhancement data.

The Examiner seems to be equating the identification number stored on the cartridge (Hilton, col. 9, lines 50-51) with cartridge image enhancement data. This is simply not logical. Hilton's identification number is not image enhancement data. Hilton's identification numbers cannot be implemented. They are merely compared with numbers in Hilton's printer controller memory. Hilton, col. 9, lines 50-54. Should the Examiner persist, the Applicants respectfully request the Examiner to specifically identify and explain where in this passage (or elsewhere in Hilton) such a device memory is taught.

The Examiner asserts that the second element of Claim 22 is taught by Hilton, col. 9, line 39 through col. 10, line 10 and Figs. 6-9. Nothing in that passage, quoted above, or the Hilton's figures teaches or suggests execution logic configured in the manner required by Claim 22. More specifically, nothing in the cited passage or elsewhere teaches or suggests execution logic that can implement cartridge image enhancement data, if present, where that cartridge enhancement data is programmed on a computer readable medium integrated into a removable cartridge for the image forming device.

For at least these reasons, Claim 22 is clearly patentable over Hilton.

CONCLUSION: The foregoing is believed to be a complete response to the outstanding Office Action. Claims 1-14, 17-18, 21, and 22 are all felt to be in condition for allowance. Consequently, early and favorable action allowing these claims and passing the application to issue is earnestly solicited. The foregoing is believed to be a complete response to the outstanding Office Action.

Respectfully submitted,

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